Reply to Office Action of March 13, 2009

## **AMENDMENTS TO THE CLAIMS**

Docket No.: ASZD-P01-228

- 1. (Currently Amended) A method for identifying an inhibitor compound capable of reducing the interaction between a first component and a second component, comprising:
- a) placing in contact:
  - i) a potential inhibitor compound;
- ii) a first component which is an 8-10 amino acid fragment of a nuclear protein, wherein the fragment comprises only one signature motif B<sup>1</sup>XXLL, in which B<sup>1</sup> is any natural hydrophobic amino acid, L is leucine, and X independently represents any natural amino acid, and the signature motif is a structural element of a nuclear protein that binds to a liganded nuclear receptor in the process of activating or repressing target genes, and the nuclear protein is a bridging factor responsible for an interaction between a liganded nuclear receptor transcription factor and a transcription initiation complex involved in regulation of gene expression provided that the fragment does not comprise a sequence XLXXLLLXXX (SEQ ID NO 82).
- iii) a second component which comprises a liganded nuclear receptor transcription factor or a fragment thereof, wherein the fragment comprises that part of the nuclear receptor which is capable of interacting with the nuclear protein through binding to the signature motif; and
- b) detecting the presence or absence of inhibition of the interaction between ii) and iii).
- 2. (Cancelled)
- 3. (Previously Presented) A method according to claim 1, wherein B<sup>1</sup> is leucine or valine.
- 4. (Previously Presented) A method according to claim 3, wherein B<sup>1</sup> is leucine.
- 5. (Withdrawn) A method according to claim 1 wherein the signature motif is  $B^2B^1XXLL$  wherein  $B^2$  is a hydrophobic amino acid.

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6. (Withdrawn) A method according to claim 5, wherein B<sup>2</sup> is selected from isoleucine, leucine, methionine, phenylalanine, tryptophan, tyrosine and valine.

- 7. (Previously Presented) A method according to claims 1, 3, or 4, wherein the nuclear protein is a coactivator.
- 8. (Previously Presented) A method according to claim 7, wherein the coactivator is selected from RIP 140, SRC-1, TIF2, CBP, p300, TIF1, Trip1, Trip2, Trip3, Trip4, Trip5, Trip8, Trip9, p/CIP, ARA70 & Trip230.
- 9. (Previously Presented) A method according to claims 1, 3, or 4, wherein the transcription factor is a steroid hormone receptor.
- 10. (Previously Presented) A method according to claim 9, wherein the steroid hormone receptor is selected from oestrogen receptor, progesterone receptor, androgen receptor and glucocorticoid receptor.
- 11. (Previously Presented) A method according to claim 10, wherein the steroid hormone receptor is oestrogen receptor.
- 12. (Previously Presented) A method according to claims 1, 3, or 4, wherein the method is a 2-hybrid assay.
- 13. (Previously Presented) A method according to claims 1, 3, or 4, wherein the potential inhibitor compound is a member of a peptide library based on the signature motif.
- 14. (Withdrawn) A novel inhibitor identified according to the method defined in claim 1 which reduces the interaction between
  - a) a first region which is a signature motif on a nuclear protein, and

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b) a second region which is that part of a nuclear receptor which is capable of interacting with the nuclear protein through binding to the signature motif, wherein:

the nuclear protein is a bridging factor that is responsible for the interaction between a liganded nuclear receptor and the transcription initiation complex involved in regulation of gene expression;

the nuclear receptor is a transcription factor;

the signature motif is a short sequence of amino acid residues which is the key structural element of a nuclear protein which binds to the liganded nuclear receptor as part of the process of activation or repression of target genes.

- 15. (Withdrawn) An inhibitor according to claim 14 which is a peptide of less than 15 amino acid residues.
- 16. (Withdrawn) An inhibitor according to claim 15 selected from the group consisting of PQAQQKSLLQQLLT (SEQ ID NO: 2), KLVQLLTTT (SEQ ID NO: 3), ILHRLLQE (SEQ ID NO: 4) and LLQQLLTE (SEQ ID NO:5).
- 17. (Withdrawn) An inhibitor according to claim 14 comprising an antibody which specifically binds to a signature motif on a nuclear protein.
- 18. (Withdrawn) A pharmaceutical composition which comprises an inhibitor as defined in claim 14 or a pharmaceutically-acceptable salt thereof, in association with a pharmaceutically-acceptable diluent or carrier.
- 19. (Withdrawn) A method of mapping nuclear receptor interaction domains in nuclear proteins in which the method comprises analysis of the sequence of a nuclear protein for the presence of signature motifs as defined in claim 1 in order to identify an interaction domain or a potential interaction domain.

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20. (Withdrawn) A pharmaceutical composition which comprises an inhibitor as defined in

claim 15 or a pharmaceutically-acceptable salt thereof, in association with a pharmaceutically-

acceptable diluent or carrier.

21. (Withdrawn) A pharmaceutical composition which comprises an inhibitor as defined in

claim 16 or a pharmaceutically-acceptable salt thereof, in association with a pharmaceutically-

acceptable diluent or carrier.

22. (Withdrawn) A pharmaceutical composition which comprises an inhibitor as defined in

claim 17 or a pharmaceutically-acceptable salt thereof, in association with a pharmaceutically-

acceptable diluent or carrier.

23. (Cancelled).